

FUTURE FISHERIES IMPROVEMENT PROGRAM

FWP AND FUTURE FISHERIES CITIZEN REVIEW PANEL RECOMMENDATIONS WINTER 2015

- 1) **FFI-001-2015. BARKER-HUGHESVILLE FISH BARRIER.** Dry Fork Belt Creek (Cascade County) is a tributary to Belt Creek near Monarch that currently supports five tributary populations of westslope cutthroat trout (WCT) with over 99% genetic purity. This project involves construction of a fish barrier near the mouth of the Dry Fork Belt Creek and the subsequent removal of existing non-native fishes from the mainstem and some tributaries. The overall goal is to prevent upstream movement of non-native fishes, and expand the potential miles of stream available to WCT. This project is a supplement to a previous project and requests \$40,000 for barrier construction. The increased project costs are attributed to higher-than-anticipated construction bids and projected dewatering costs.
- The applicant is requesting **\$40,000** in Program funds for construction (to add to previously approved funds of \$10,000) and plans to contribute \$202,200 in matching funds to the project. The total cost is \$252,200. RIT eligible.
 - The initial FWP recommendation was to fund the project at the lower range of the dewatering cost, for a total of \$30,000 in Program funds.

Initial FWP recommendation	\$30,000
Citizen Review Panel recommendation	same

- 2) **FFI-002-2015. BITTERROOT RIVER RIPARIAN FENCING.** This project is located on the Bitterroot River (Missoula County), on Sapphire Ranch and State property. The applicant (leasee) proposes to convert existing riparian fence to wildlife-friendly fence, repair dilapidated sections of fence, and build new fence on the east side of the river, which will exclude cattle from the riparian areas. The fenced areas are located in three sections of land in township 11 north, range 20 west. The fence in section 24 was partially washed out in a high flow event and is not functional. The existing riparian fence within sections 12 and 13 is functional, but not wildlife friendly. The applicant proposes a new fence on the opposite (east) side of the river in section 12. The existing fenced areas were previously funded with FFIP dollars (expired).
- The applicant is requesting **\$7,035.60** in Program funds for fence repairs, conversion to wildlife-friendly fence, and new riparian fence. They plan to contribute \$3,200 in matching funds for a total project cost of \$10,235.60.
 - The initial FWP recommendation was to fund the project, with the exception of the wildlife-friendly portion, for a total of \$4,990.40 in Program funds.

Initial FWP recommendation	\$4,990.40
Citizen Review Panel recommendation	same

- 3) **FFI-003-2015. BULL RIVER RIPARIAN RESTORATION.** Bull River (Sanders County) is a tributary to the lower Clark Fork River and supports a community of brown trout, bull trout, and mountain whitefish with westslope cutthroat trout present. The Bull River drainage provides the most important spawning and rearing habitat for native westslope cutthroat trout and bull trout in the Cabinet Gorge reach of the lower Clark Fork River. However, Bull River is impaired by sedimentation and physical habitat alterations caused by bank erosion, roads, and upland load. This project addresses the bank erosion by controlling non-native reed canary grass through the use of weed barrier, and by planting native shrubs and trees along approximately 11,000 linear feet of river. The goal is to improve streambank stability over time and re-establish a healthy riparian area to reduce sediment loading and enhance wild fish habitat.

- The applicant is requesting **\$50,000** in Program funds for construction materials and labor and is contributing \$174,770 in matching contributions to the project. The total cost would be \$224,770. RIT eligible.
- Due to limited funds and questions regarding the high cost of construction materials, FWP recommended funding the fencing at \$3.00 per linear foot and plantings at \$5.00 per linear foot (\$32,100 in Program funds). The Future Fisheries Citizen Review Panel recommended fencing at \$2.00 per linear foot (\$29,282 in Program Funds).

Initial FWP recommendation	\$32,100
Citizen Review Panel recommendation	\$29,282

- 4) **FFI-004-2015. DEEP CREEK RIPARIAN HABITAT AND STREAMFLOW IMPROVEMENT.** Deep Creek (Broadwater County) is a tributary to the Missouri River that primarily supports brown trout and rainbow trout, and has been the focus of restoration projects for many years. Sediment inputs, high temperatures, and reduced streamflow are all factors that have affected the stream. Riparian fencing was installed along Deep Creek in the past, but was often located too close to the stream. Flooding in 2011 damaged the existing fence in many locations along the lower 15 miles of Deep Creek. This project requests funds to repair or replace 15 miles of fence (\$1.40 per foot, requesting 9% of total cost), and locate it further from the stream. Additionally, the applicant is requesting funds to eliminate a major irrigation diversion from Deep Creek, improving streamflow, reducing temperature, eliminating fish loss, and restoring upstream fish passage.

- The applicant is requesting **\$20,000** in Program funds for fence materials and intake structure and is contributing \$106,208 in matching funds to the project. The total cost is \$126,208.

Initial FWP recommendation	\$20,000 (as requested)
Citizen Review Panel recommendation	same

- 5) **FFI-005-2015. DOUGLAS CREEK FISH LADDERS.** Douglas Creek (Powell County) is a tributary to Nevada Creek, within the Blackfoot River drainage. Westslope cutthroat trout are located near the mouth of Douglas Creek where they are now increasing in abundance. Improving fish passage is intended to promote recovery of cutthroat trout in this location. This project was developed in conjunction with the 310 permitting process and represents an opportunity to ensure fish passage at existing diversions in conjunction with landowner irrigation needs, potentially restoring corridors for trout movement. This is a cost-share project between FWP and the U.S. Fish and Wildlife Service, and maintenance and operation of the ladders will be the responsibility of Myers Company Ranch.

- The applicant is requesting **\$2,496.50** in Program funds for the cost of one fish ladder and its associated installation labor. The match is \$2,496.50 for a total cost of \$4,993. RIT eligible.

Initial FWP recommendation	\$2,496.50 (as requested)
Citizen Review Panel recommendation	same

- 6) **FFI-006-2015. FRENCH GULCH CHANNEL RELOCATION.** French Gulch (Deerlodge County) is a tributary to French Creek, which flows into Deep Creek and the Big Hole River. Placer mining activities occurred in the French Gulch drainage from the mid 19th century to the early 1990's, resulting in stream habitat that has been degraded by stream channel straightening, the presence of large dredge spoils, increased stream gradient, reduced riparian area width, and isolation of the stream from its floodplain. The purpose of this project is to restore habitat impacted by placer mining. Restoration activities include reconstruction of the floodplain and stream channel, redirecting the streamflow, and plugging the old channel. The new channel would be vegetated with transplanted material or bioengineering techniques. The goal is to increase the number of westslope cutthroat trout and arctic grayling in French Gulch by addressing the habitat limitations and potentially opening habitat to fluvial fish from French Creek. This project would be located upstream of the French Creek fish barrier.

- The applicant is requesting **\$200,000** in Program funds for design, oversight, construction management, and construction materials. The applicant is providing \$853,961 in matching contributions for a total project cost of \$1,053,961. RIT eligible.
- Due to limited funds and the scope of this project, FWP recommended funding the lowermost portions of the project (Restoration Reach 1 and the Habitat Improvement areas) for a cost of \$114,061 in Program funds.

Initial FWP recommendation	\$114,061
Citizen Review Panel recommendation	same

- 7) **FFI-010-2015. MOORES CREEK GRAZING AND WATER QUALITY ENHANCEMENT.** Moore's Creek (Madison County), is a tributary to the Madison River with

perennial streamflow. It is believed to contain rainbow, brown, and brook trout, and will be sampled to collect more specific fish data when the project is completed. In a 3,200-foot section of Moore's Creek on the Goggins Ranch, the applicant proposes to install electric riparian fencing, hardened crossings, two water gaps in areas where livestock are rotated, and off-channel water sources for the pastures and corrals. The ranch would use a rest-rotation grazing program. This project also involves working with the Ennis High School Science club to plant willows. The local fisheries biologist supports this project and believes it would have positive potential for fisheries, and it could serve as a step forward in developing additional, similar projects in coming years.

- The applicant is requesting **\$10,478** in Program funds for electric fence, and would contribute \$29,586.81 in matching funds for a total project cost of \$40,064.81.

Initial FWP recommendation	\$10,478 (as requested)
Citizen Review Panel recommendation	same

- 8) **FFI-011-2015. MULHERIN CREEK FISH SCREEN.** Mulherin Creek (Park County) is a tributary to the Yellowstone River and the third greatest producer of Yellowstone cutthroat fry to the Yellowstone River. Trapping data indicated that a substantial portion of outmigrating fry are entrained in the canal. Spawning adults have also been found in the canal or irrigated fields. A fish screen was installed in the 1990's at this location, but failed because a clogged infiltration gallery led to a water user cutting the pipe to ensure water delivery. This project proposes to install a more functional, low-maintenance fish screen (Farmer's fish screen) to stop entrainment of Yellowstone cutthroat trout while allowing for delivery of diverted water.

- The applicant is requesting **\$40,000** in Program funds for the fish screen and plans to contribute \$40,870 in matching funds for a total project cost of \$80,870. RIT eligible.
- Due to the limited Program funds available, the amount of unsecured funds, and the ability of the project to be delayed, FWP recommended funding this project at \$20,000. This funding amount could serve as seed money to secure additional funds.

Initial FWP recommendation	\$20,000
Citizen Review Panel recommendation	same

- 9) **FFI-012-2015. MUSSELLSHELL RIVER EGGE DIVERSION REMOVAL.** The Egge Diversion (Golden Valley County), on the Musselshell River, has been in place for nearly 100 years. A 2011 flood flanked the diversion and led to severe erosion on the adjacent bank. This project proposes to maintain the recent connectivity in the Musselshell River by removing the former fish barrier and allowing for natural streamflow. Removal would open up a continuous 24-mile reach for fish passage, connecting the tributaries Big Coulee Creek and Painted Robe Creek, which contain northern redbelly dace and hybrid finescale dace (species of concern), and many other native fish species. Spiny softshell turtles (species of concern) and fatmucket clams

are also found in this region. The erosion on the bank adjacent to the diversion would be repaired using bioengineered soil lifts rather than traditional rock riprap or rubble.

- The applicant is requesting **\$20,000** for diversion removal and is contributing \$101,500 in matching funds for a total project cost of \$121,500. RIT eligible.

Initial FWP recommendation	\$20,000 (as requested)
Citizen Review Panel recommendation	same

- 10) **FFI-013-2015. RUBY CREEK CHANNEL RELOCATION.** Ruby Creek (Madison County) is a tributary to the Madison River and the site of an ongoing westslope cutthroat restoration project. Chemical treatments from 2012 to 2014 removed non-native trout, and westslope cutthroat trout introductions are planned. Along Ruby Creek, within the FWP Wall Creek Management Area, an actively eroding vertical bank likely will lead to collapse of the McAtee Homestead site, potentially leading to impeded stream flow and riparian scour and erosion. This project will relocate the active stream channel away from a vertical eroding bank by constructing a new stream channel, bringing in fill material, and using riparian soils and vegetation from the channel excavation to develop a riparian floodplain at the location of the existing channel (against the vertical bank). The purpose of this project is to establish proper stream channel form and function, develop the riparian floodplain, and prevent the historic cabin from collapsing into Ruby Creek.

- The applicant is requesting **\$2,475** in Program funds for mobilization and is contributing \$12,600 to the project. The total project cost would be \$15,075. RIT eligible.

Initial FWP recommendation	\$2,475 (as requested)
Citizen Review Panel recommendation	same

- 11) **FFI-014-2015. SHANLEY CREEK RESTORATION.** Shanley Creek (Powell County) is a second-order tributary to Cottonwood Creek, is a bull trout core area stream, and supports pure populations of westslope cutthroat trout. Past projects in this area have addressed fish passage, grazing management, and fish screening. Currently, poor road locations and undersized stream crossings negatively affect the stream. This project involves relocating nearly one mile of road out of the Shanley Creek floodplain, and replacing two undersized culverts with a single crossing capable of passing a 100-year flood event. The bed and banks of the stream at each crossing would be restored. An unimproved ford would be upgraded with a short-span bridge to accommodate the new road system location. The goal of this project is to correct the road damage problems, eliminate sources of excessive sediment, provide for fish passage, and restore natural channel morphology at the impaired crossings.

- The applicant is requesting **\$12,100** in Program funds for labor, construction materials, and equipment, and is contributing \$28,302 in matching funds for a total project cost of \$40,402. RIT eligible.

Initial FWP recommendation	\$12,100 (as requested)
Citizen Review Panel recommendation	same

- 12) **FFI-015-2015. SMITH SLOUGH SPAWNING ENHANCEMENT.** Located approximately 3.5 miles southwest of Twin Bridges, this project involves a 2-mile-long slough channel of the Big Hole River (Smith Slough) and a 1-mile segment of the connected Smith Ditch. The Smith Slough currently comes off the Big Hole River, where it is controlled by a headgate. Downstream of the headgate, the ditch/slough system is split in half and water is divided between the slough and the Smith Ditch. The ditch and slough run parallel for more than a mile before converging and discharging into the Big Hole River. The purpose of this project is to improve wild brown trout and rainbow trout spawning (as well as habitat for adult fish), water quality, and water quantity in the slough and Big Hole River, where there are few spawning tributaries. This project would relocate the headgate and ditch, redirect irrigation return flows away from the slough, narrow and deepen the channel, and realign portions of the ditch and slough. The applicant requests that Program funds be used for the Smith Ditch spawning gravel portion, which involves constructing 1,600 feet of spawning areas in the ditch channel by adding spawning gravel. Subsequently, a water management plan would be developed and fertilized eggs would be stocked to jump-start the fishery. This project is intended to benefit rainbow trout and brown trout.

- The applicant is requesting **\$50,000** in Program funds for the installation of spawning gravel in the Smith Ditch, and is contributing \$342,495 in matching funds for a total project cost of \$392,495.
- The initial FWP recommendation was to table the project until additional information on the existing environment and proposed flow management plan could be provided. The applicant was encouraged to re-apply to the Program.

Initial FWP recommendation	table project
Citizen Review Panel recommendation	same

- 13) **FFI-016-2015. STONEWALL CREEK RESTORATION.** Stonewall Creek (Lewis and Clark County) is a tributary to Keep Cool Creek, within the Blackfoot River drainage, and contains westslope cutthroat trout. This project is located in an area that has been impacted by placer mining. Tailing piles confine the creek, the floodplain has limited connectivity, and the riparian area does not function well. This project seeks to restore this section of Stonewall Creek by removing tailing piles, adding woody debris complexes to the stream, and restoring the adjacent floodplain and riparian area. The goals of this project include contributing to the recovery of westslope cutthroat trout by expanding suitable habitat and improving water quality on-site and downstream of the project.

- The applicant is requesting **\$41,000** for mine waste removal and disposal, containerized plants, browse protectors, and equipment. Matching funds are listed as \$283,050 for a total project cost of \$324,050. RIT eligible.

Initial FWP recommendation	\$41,000 (as requested)
Citizen Review Panel recommendation	same

- 14) **FFI-017-2015. T&Y DIVERSION FISH SCREEN REPAIR.** The T&Y diversion fish screen (Custer County) is located on the Tongue River and was installed in 1999 to reduce fish entrainment into the T&Y Irrigation Canal. Prior to installation, the metal louvers were coated with a 30-year protective coating, which is failing after only 15 years. This project proposes to remove, clean, and galvanize the louvers. Repairing the louvers will prevent the fish screen from failing and ensure that fish continue to be screened at the diversion. This fish screen has prevented entrainment of an average of 17,225 fish per year representing 20 species.

- The applicant is requesting **\$9,335** in Program funds for labor, galvanizing, and transportation of the louvers, with a matching contribution of \$11,565, for a total project cost of \$20,900. RIT eligible.

Initial FWP recommendation	\$9,335 (as requested)
Citizen Review Panel recommendation	same

- 15) **FFI-018-2015. THEODORE CREEK FISH PASSAGE IMPROVEMENT.** Theodore Creek (Lewis and Clark County) is a tributary to Beaver Creek and supports fluvial, genetically pure westslope cutthroat trout. Bull trout were also historically found in the system. This project would replace an undersized culvert that impedes fish passage during high flows with a pre-stressed concrete bridge structure that will create year-round connectivity and natural stream conditions.

- The applicant is requesting **\$20,000** in Program funds for construction materials and equipment, with a matching contribution of \$140,394.50, for a total project cost of \$160,394.50. RIT eligible.

Initial FWP recommendation	\$20,000 (as requested)
Citizen Review Panel recommendation	same

- 16) **FFI-019-2015. UPPER LOLO CREEK SEDIMENT REDUCTION.** The Upper Lolo Creek watershed (Missoula County) is significantly impacted by sediment generated by forest roads and failing culverts. This area is considered important habitat for bull trout, and the project is part of a long-term restoration effort to remove culverts that are fish barriers and reclaim excess forest roads that add sediment to the Upper Lolo Creek system. The project intends to re-contour 12-14 miles of forest roads and remove at least eight culverts, reducing sediment and improving

fish passage in the drainage. The culvert removal and fish passage portion of the project is supported by the local fisheries biologist as the most appropriate use of FFIP funds.

- The applicant is requesting **\$87,000** in Program funds for oversight, construction materials, equipment, and mobilization, and will contribute \$94,650 in matching funds for a total project cost of \$181,650. RIT eligible.
- The initial FWP recommendation was to fund the culvert portion of the project only, estimating the cost of culvert removal as 50% of the request (\$43,000). Due to limited funds, the Panel recommended funding a portion of the project but encouraged the applicant to reapply.

Initial FWP recommendation	\$43,000
Citizen Review Panel recommendation	same

- 17) **FFI-020-2015. UPPER SLEEPING CHILD/RYE CREEK SEDIMENT.** Sleeping Child Creek and Rye Creek (Ravalli County) are tributaries of the Bitterroot River and contain populations of bull trout and westslope cutthroat trout. The project areas, near the headwaters of each stream, were heavily roaded and clear-cut in the 1980's and 1990's. High intensity fires burned the areas in 2000, exacerbating chronic sediment loading. Sleeping Child and Rye Creeks are both 303(d)-listed and have completed TMDLs for sediment. This project is part of a larger plan to restore the area, which will be completed in phases. The applicant proposes to decommission at least 20 miles of roads to reduce sediment and restore the watershed, and to remove at least 19 stream crossing culverts (the budget sheet lists 20 culverts). The recontoured road would be seeded with grasses.

- The applicant is requesting **\$55,000** in Program funds, citing a matching contribution of \$193,480, for a total project cost of \$248,480. RIT eligible.
- Due to limited funds, FWP recommended funding 19 culvert removals and reducing the oversight portion of the request, for a total of \$42,900.

Initial FWP recommendation	\$42,900
Citizen Review Panel recommendation	same

- 18) **FFI-021-2015. WEST FORK JACOBSEN SPRING CREEK RESTORATION.** West Fork Jacobsen Spring Creek (Powell County) is a tributary to Jacobsen Spring Creek, which contains bull trout and westslope cutthroat trout, and feeds the North Fork of the Blackfoot River. West Fork Jacobsen Spring Creek is currently over-wide and shallow, impacted by livestock hoof shear. Three undersized culverts cause backwater ponding issues, further affecting water temperature and stream flow. This project would restore the stream channel to a more natural channel width, depth, and dimension, and install riparian vegetation to stabilize the streambanks.

The three undersized stream crossings would be upgraded, and a grazing management plan would be incorporated.

- The applicant is requesting **\$7,500** in Program funds, with a matching contribution of \$30,700, for a total project cost of \$38,200. RIT eligible.
- Due to limited funds and designs lacking sufficient detail, FWP recommended that this application be tabled until additional information is available. After additional explanation was provided, the Panel recommended funding this project at the full amount requested.

Initial FWP recommendation	table project
Citizen Review Panel recommendation	\$7,500 (as requested)

- 19) **FFI-022-2015. YUKON CREEK FISH PASSAGE IMPROVEMENT.** Yukon Creek (Lewis and Clark County) is a tributary to Beaver Creek and supports fluvial, genetically pure westslope cutthroat trout. This project addresses an existing stream crossing that is undersized, impedes fish passage during high flows, and impairs the channel. The existing 60-inch culvert would be replaced with a bottomless arch structure large enough to pass 100-year flood events. The goals of this project are to develop a stable stream crossing that would correct road drainage problems, eliminate delivery of excessive sediment, provide fish passage, and restore natural channel morphology to the site.

- The applicant is requesting **\$23,400** in Program funds, with a matching contribution of \$139,177.50, for a total project cost of \$162,577.50. RIT eligible.

Initial FWP recommendation	\$23,400 (as requested)
Citizen Review Panel recommendation	same